Organisation of Engineering Systems and Human Resources Management - Video course

COURSE OUTLINE



NPTEL

http://nptel.iitm.ac.in

Management

Coordinators:

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(a) Course Design Rationale

The Rationale and objective of the course is to impart to the senior undergraduate engineering student:

- 1. an understanding of the theory and principles of Organisation of engineering systems & Human Resources Management.
- 2. the ability to perceive issues from an overall management perspective.
- 3. the means to analyse developments in an organisation's systems, functioning and capabilities.
- 4. the means to effectively understand organizational functioning and its human elements.
- 5. the ability to become a performance-oriented manager of systems.

(b) Course Outline

- 1. Introduction to the subject and the course
- 2. Module A: Basics of organisations and human resources management
 - 1. Understanding organisations
 - 2. Concerns of organising engineering business and systems
 - 3. Structure and process issues in running organisations
 - 4. Design issues in running organisations
 - 5. Operating organisations
- 3. Module B: Effectiveness and performance
 - 1. Cybernetics and systems framework
 - 2. Socio-technical systems
 - 3. Dealing with efficiency and excellence
 - 4. Man-machine relationship
 - 5. Longitudinal Thinking
- 4. Module C: Human elements of functioning organisations
 - 1. Concerns of recruitment, selection, skill formation and redeployment
 - 2. Developing teams and leadership
 - 3. Understanding motivation
 - 4. Elements of human resources planning
 - 5. Indian Industrial Law and managing industrial relations

COURSE DETAIL

S.No.	Content	Hours
1	Introduction to the subject and the course	1 hr
2	Module A: Basics of organizations and human resources management	
2.1	Understanding organizations: nature and functions	2 hrs
2.2	Concerns of organising engineering business and systems	3 hrs

2.3	Structure and process issues in running organisations	2 hrs
2.4	Design issues in running organisations	2 hrs
2.5	Operating organizations	3 hrs
3	Module B: Effectiveness and performance	
3.1	Cybernetics and systems framework	2 hrs
3.2	Socio-technical systems	3 hrs
3.3	Dealing with efficiency and excellence	3 hrs
3.4	Man-machine relationship	2 hrs
3.5	Longitudinal Thinking	2hrs
4	Module C: Human elements of functioning organizations	
4.1	Concerns of recruitment, selection, skill formation and redeployment	3 hrs
4.2	Developing teams and leadership	2 hrs
4.3	Understanding motivation	2 hrs
4.4	Elements of human resources planning	3 hrs
4.5	Indian Industrial Law and managing industrial relations	3 hrs
	Total Hours	38

References:

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- Coulson-Thomas Colin,((1997) The Future of Organisation: Achieving Excellence through Business Transformation ,Kogen Page
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- Dimitris N. Chorafas (2011). Business, Marketing, and Management Principles for IT and Engineering, Taylor and Francis, USA
- Gautam Vinayshil(1988) Comparative Manpower Planning Practices-Select Indian Experiences,

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- Jose Miguel Lopez-Higuera and Brian Culshaw (2008). *Engineering a High Tech Business: Entrepreneurial Experiences and Insights*, SPIE, Washington
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